

ANSWER KEY

Name: _____

Date: _____ Math: _____

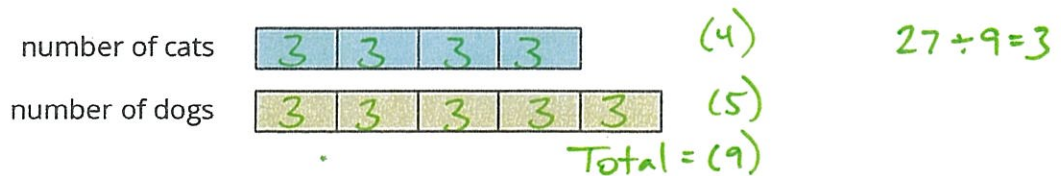
Ratios Study Guide 2

1. Here is a tape diagram representing the ratio of red paint to yellow paint in a mixture of orange paint.



- a. What is the ratio of yellow paint to red paint? The ratio of yellow to red is 2:3
- b. How many cups total of orange paint will this mixture yield? 15 cups of orange paint

2. At the kennel, the ratio of cats to dogs is 4:5. There are 27 animals in all. Here is a tape diagram representing this ratio.



- a. What is the value of each small rectangle? The value of each rectangle is 3.
- b. How many dogs are at the kennel? There are 15 dogs.
- c. How many cats are at the kennel? There are 12 cats.

3. Last month, there were 4 sunny days for every rainy day. If there were 30 days in the month, how many days were rainy? Explain your reasoning. If you get stuck, consider using a tape diagram.

There were 6 rainy days. The ratio of sunny to rainy is 4:1. That is a total of 5 days, so I divided 30 by 5 to see that each rectangle represents 6 days.

Sunny

6	6	6	6
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 (4) $30 \div 5 = 6$
rainy

6

 (1)

4. Noah entered a 100-mile bike race. He knows he can ride 32 miles in 160 minutes. At this rate, how long will it take him to finish the race? Use each table to find the answer.

Table A:

distance (miles)	elapsed time (minutes)
32	160
$\div 32$ 1	$\div 5$ 5
100	500

Table B:

distance (miles)	elapsed time (minutes)
32	160
$\cdot 3$ 96	$\cdot 3$ 480
$\cdot 4$ 128	$\cdot 4$ 640
$\cdot 25$ 100	$\cdot 25$ 500

It will take him 500 minutes to finish the race.

Next, explain which table you think works better in finding the answer and why.

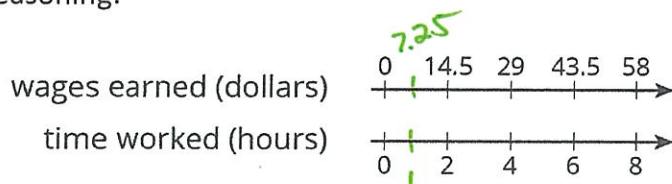
Answers vary

$$\begin{array}{r} 1 \\ 32 \\ \times 5 \\ \hline 160 \end{array}$$

$$\begin{array}{r} 160 \\ \times 3 \\ \hline 480 \end{array}$$

$$\begin{array}{r} 20 \\ 24 \overline{) 480} \\ \underline{48} \\ 0 \end{array}$$

5. A cashier worked an 8-hour day, and earned \$58.00. The double number line shows the amount she earned for working different numbers of hours. For each question, explain your reasoning.



$$\begin{array}{r} 7.25 \\ 2 \overline{) 14.50} \\ \underline{14} \\ 05 \\ \underline{04} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

a. How much does the cashier earn per hour? \$7.25 per hour

b. How much does the cashier earn if she works 3 hours? \$21.75 in 3 hours

$$\begin{array}{r} 7.25 \\ \times 3 \\ \hline 21.75 \end{array}$$

6. A grocery store sells bags of oranges in two different sizes.

- The 3-pound bags of oranges cost \$4.
- The 8-pound bags of oranges for \$9.

Which oranges cost less per pound? Explain or show your reasoning visually (i.e. show it with more than just numbers)

$$\begin{array}{r} 1.333 \\ 3 \overline{) 4.000} \\ \underline{3} \\ 10 \\ \underline{9} \\ 10 \\ \underline{9} \\ 10 \\ \underline{9} \end{array}$$

The first bag costs \$1.33 per pound.
The second bag costs \$1.13 per pound.

The second bag costs less per pound.

$$\begin{array}{r} 1.125 \\ 8 \overline{) 9.000} \\ \underline{8} \\ 10 \\ \underline{8} \\ 20 \\ \underline{16} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

Oranges (lbs)	cost (\$)
3	4
$\div 3$ (1)	$\div 3$ (\$1.33)

Oranges (lbs)	cost (\$)
8	9
$\div 8$ (1)	$\div 8$

